REMARKS

Claims 1-25 are pending in this application, with claims 11-13 currently withdrawn from consideration. Claims 1, 2, 4, 5, 6, 7, 10, 14, 19, 20, 21, 22 and 23 have been amended in order to more particularly point out, and distinctly claim the subject matter to which the Applicant regards as the invention. The Applicant respectfully submits that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated **June 17, 2005**.

Support for the amendment to the claims is discussed below.

The disclosure is objected to. (Office action page 2)

The objection to the disclosure is respectfully traversed, and reconsideration of the objection is requested.

The Examiner objects to the use of quotation marks in the disclosure. The quotation marks occur around the terms "specific molecule", "substance capable of changing dielectrophoretic properties of the specific molecule", etc.

The Examiner states that quotation marks "imply the terms used are repugnant to their general definition." However, Applicant is unfamiliar with that meaning of quotation marks.

The quotation marks in the specification are being used to "enclose ... words used in a special way ..." (see, for example, Handbook of Style in *Webster's Ninth New Collegiate Dictionary*, page 1543). As such, Applicant submits that the use of the quotation marks around special phrases is grammatically acceptable and the meaning of the quotation marks in the present specification would

be understood by one of skill in the art.

The Examiner objects to the phrase "or the like" in the specification. Applicant submits, however, that an issue of whether the "scope" of a phrase in the specification is ascertainable does not provide grounds for objecting to the specification. The occurrence of this phrase in the specification does not raise the issue of indefiniteness that would be caused by the occurrence of the phrase in a claim.

Claims 1-25 are objected to. (Office action page 2)

The Examiner objects to the use of quotation marks in the claims. Applicant respectfully traverses this objection, arguing that the issue is the same as that discussed above for the quotation marks in the specification. One of skill in the art would understand that the quotation marks delineate a phrase defining a particular claim element.

The Examiner objects to claim 14 because it is missing 'from' at the beginning of line 2. The rejection is overcome by the amendment to claim 14, correcting this error.

Claim 1 is rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for conductive material made of gold and aluminum, does not reasonably provide enablement for or the like. (Office action page 3)

The rejection of claim 1 is respectfully traversed, and reconsideration of the rejection is requested.

Applicant notes, first of all, the issue raised by the Examiner appears not to be one of enablement, but one of written description. Applicant notes that the Examiner asks: "What other conductive materials would be included or excluded?", which appears to be a written description issue. Applicant argues that the claims are fully enabled. One of skill in the art could readily find a suitable conductive material and perform the method. Indeed, one of skill in the art could perform the method with any of a variety of conductive materials. Claim 1 is therefore enabled.

With regard to the apparent written description issue apparently raised by the Examiner, Applicant notes that the Examiner appears to be stating that the term "conductive material", used in the claim, is not properly described in the specification. Applicant respectfully disagrees. **The term "conductive material" is a conventional term well understood by one of skill in the art.** One of skill in the art would readily identify what was meant by this term and would understand that in the phrase "conductive materials such as, for example, aluminum, gold, and the like" (page 41, line 17), aluminum and gold are merely **exemplary**, and are not included in the text to define the term "conductive materials", nor are they necessary to define this term.

Claims 1-25 are rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for the following molecules, ... (Office action page 3)

Claims 1-25 are rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for the following substances capable of changing electrophoretic properties ..... (Office action page 4)

Claims 1-25 are rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for a substance binding to a specific molecule consisting of ....(Office action page 5)

These rejections under 35 U.S.C. 112, first paragraph, are respectfully traversed, and reconsideration is requested.

Applicant first notes that, as with the above rejection of claim 1, the issue raised by the Examiner does not appear to be one of enablement, but rather, what is the scope of the term "molecule" and "specific molecule" in the claims.

In response, Applicant argues that one of skill in the art can carry out the individual steps of the method claims, and one of skill in the art would know on which sorts of molecules these steps can be carried out.

The present invention relates to a method of (1) forming a complex from "specific molecule", "capable of changing dielectrophoretic properties", and/or "substance binding to a specific molecule", (2) using an uneven electric field of 500 KV/m or more of electric intensity to separate the complex from other molecules.

And, if the separating method of the present invention is used, it is possible to separate the complex from other molecules with higher separation efficiency than the conventional separating method.

It is naturally understood by those skilled in art that in "specific molecule", "capable of changing dielectrophoretic properties", and "substance binding to a specific molecule" described in

the specification, the complex is formed by a specific combination (in the specification, part of the combination is described). And, it would be understood that since the thus formed complex is a large molecule, it is easily separated from other small molecules, and it is apparent for those skilled in art that in the present invention, since the uneven field of 500 kVm or more of field intensity is used to thereby facilitate separation from the description of the specification.

Moreover, the conditions for performing the method of the invention may be easily optimized by considering various factors such as kind and properties of "specific molecule" to be separated, kind and properties of "capable of changing dielectrophoretic properties" used, kind and properties of "substance binding to a specific molecule", using concentration thereof, field intensity, migration distance, electrode, and the like. Such an optimization is easily achieved at a normal experiment level by those skilled in art in accordance with the description in the specification of the present invention, and without performing undue experiments.

Claims 1-25 are rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for the following labeling substances or testing methods ... does not reasonably provide enablement for ["and the like"]. (Office action page 6)

The rejection of claims 1-25 is respectfully traversed, and reconsideration of the rejection is requested.

First of all, Applicant submits that the relationship between labeling substances and testing methods in the rejection is unclear. Moreover, it is unclear how this rejection is applicable to those

claims that do not recite labeling substances.

Applicant also notes the Examiner's comment: "How could one produce a **single** instrument for each of these detection methods?" (emphasis added). In fact, none of the claims requires a **single** instrument for different detection methods.

In the present specification, it is described that the labeling substance used in the field of EIA, RIA or FIA can be used in the present invention. Labeling substances used in the technical field of EIA, RIA and FIA can be applied in the present invention, well known to those skilled in art.

Moreover, optimization of the labeling substance may be easily achieved by considering various factors, such as the kind and properties of the "specific molecule" as separating object, kind and properties of "capable of changing dielectrophoretic properties" used, kind and properties of material "substance binding to a specific molecule", their concentrations, kind of measuring apparatus, and the like. Such optimization can be achieved easily by those skilled in art in accordance with the description of the present specification, without performing undue experiments, and at a normal experimental level.

Claims 25 are rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for only dielectrophoretic forces, does not reasonably provide enablement for the combination of (1) dielectrophoretic forces and (b) forces selected from the group consisting of electrophoretic forces and forces of solution flow ...(Office action page 7)

The rejection of claim 25 is respectfully traversed.

The Examiner refers to the wording of claim 25: "dielectrophoresis is conducted by (i) only dielectrophoretic forces or (ii) only the combination of (a) dielectrophoretic forces and (b) forces selected from group consisting of electrophoretic forces and forces of a solution flow (forces by a mobile phase)".

Although stated as an enablement rejection, the Examiner indicates that: "The examples given to justify the addition of claim 25 do not have sufficient support in the specification ..." Applicant submits that comment by the Examiner is unclear, since this is an enablement rejection. Moreover, claim 25 was added in the Amendment of August 14, 2003, in which Applicant indicated support for the claim at page 14, lines 13-15; page 17, lines 18-22; page 28, line 19, to page 30, line 7; page 24, line 6 to page 36, line 8; page 71, lines 10-13; and page 74, line 4.

Since the Examiner is referring to these as the "examples", it is unclear how they cannot have support in the specification, since they are in the specification.

Applicant submits that the Examiner has not stated any specific argument that claim 25 is not enabled, and Applicant argues that one of skill in the art could carry out the method of claim 25..

Claims 1, 2, 4, 5, 6, 7, 14, 15, 16 and 17 are rejected under 35 U.S.C. §112, second paragraph. (Office action page 8)

The rejection is overcome by the amendments to the claims.

The Examiner notes that it is unclear whether "molecules" and "specific molecule" in the sample refer to the same of different substances. In the amendment to claim 1, for example, the

phrase "forming the complex substance of the 'specific molecule'" has been amended to "forming a reaction mixture containing a complex substance of a 'specific molecule'". (A corresponding amendment is also made in claims 2, 4, 5, 6 and 7). Applicant submits that it is apparent that the "two or more kinds of molecules" in the preamble refers to the "specific molecule" and "molecules other than the "specific molecule" in the last clause of claim 1.

In addition, the wording "**applying** the resulting reaction mixture ... **to dielectrophoresis** ..." has been amended to "subjecting to ... the application of dielectrophoresis".

Applicant notes that the Examiner appears to be incorrect that there is insufficient basis for the recitation in claim 9 of "substance capable in changing dielectrophoretic properties" The antecedent basis occurs in the base claims 1-7.

The Examiner notes that the term "substance binding to the specific molecule", recited in claim 10, occurs in claims 4, 5 and 6, but not claims 1, 2, 3 or 7. Claim 10 has been amended to clarify the claim scope.

Applicant submits that the general wording in claims 14, 15, 16 and 17 is sufficiently clear so as not to require amendment. Applicant also believes there is sufficient antecedent basis for the recitation in claim 24.

Claims 19-23 have been amended in response to the rejection. The amendments delete the dependence of these claims from claim 14.

Claims 1-10, 15-17, 24-25 are rejected under 35 U.S.C. §102(e) as being anticipated by Parton, et al. (U.S. Patent No. 5993631). (Office action page 11)

The rejection is overcome by the amendment to the claims. Claims 1, 2, 4, 5, 6, and 7, have been amended, in part, as follows: "a nonuniform electric field, which is an AC electric field or a DC electric field having an electric field strength of 500 kV/m or higher". Support for the recitation that the electric field may be an AC electric field or a DC electric field may be found in the specification on page 27, last three lines, where it states: "the electric field to be applied can be any of an AC electric field and a DC electric field ...."

That is, in the present invention, only one kind of electric field is applied. By contrast, in Parton, special voltages (fields) of four kinds of different phases are applied. Accordingly, in the present invention, a field traveling wave is not generated, unlike in Parton. Applicant notes that the method of the present claims does not use TWFM.

Moreover, Parton does not disclose a field intensity of 500 kV/m or more. Applicant submits that in the method of the present invention, with an electric field strength of 500 kV/m or more, unexpected results are achieved.

Claims 1-10 are rejected under 35 U.S.C. §102(e) as being anticipated by Becker, et al. (U.S. Patent No. 6294063). (Office action page 12)

The rejection is overcome by the amendment to the claims. As noted above, claims 1, 2, 4, 5, 6, and 7, have been amended, in part, as follows: "a nonuniform electric field, which is an AC electric field or a DC electric field having an electric field strength of 500 kV/m or higher".

Applicants submit that this limitation distinguishes the present claims from Becker et al.

In view of the aforementioned amendments and accompanying remarks, the claims, as amended, are in condition for allowance, which action, at an early date, is requested. Reconsideration of the rejections and objections is respectfully requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, KRATZ, QUINTOS,
HANSON & BROOKS, LLP

Daniel A. Geselowitz, Ph.D.
Agent for Applicants
Reg. No. 42,573

DAG/lrj:xl
Atty. Docket No. **001268**
Suite 1000
1725 K Street, N.W.
Washington, D.C. 20006
(202) 659-2930

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